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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,519	12/27/2001	Isao Suzuki	2001_1877	1889

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EXAMINER

KRISHNAMURTHY, RAMESH

ART UNIT	PAPER NUMBER
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3753

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DATE MAILED: 05/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,519

Applicant(s)

SUZUKI, ISAO

Examiner

Ramesh Krishnamurthy

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 7, 9 and 14 is/are rejected.
- 7) ☒ Claim(s) 8 and 10 - 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 3753

This office action is responsive to communications filed 03/15/2002.

Claims 1 – 14 are pending.

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Mass flow controller.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 is incomplete, as it appears to be missing some text after "yoke" in line 7.

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1 – 5, 7, 9, and 14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 12, 4, 5, 7, 9 and 11 (numbering of the claims as originally filed) respectively of

copending Application No. 09/951,625. Although the conflicting claims are not identical, they are not patentably distinct from each other because (a) claim 1 of the instant application omits the recitation of "in a pre-determined range" at line 2 when compared to claim 1 of 09/951,625. However, it is recognized that any mass flow controller has to operate over a range of flow rates and as such claim 1 of co-pending application of 09/951,625 anticipates claim 1 of the instant application (b) Claim 9 of the instant application is anticipated by claim 9 of copending Application No. 09/951,625 since claim 9 of the copending Application No. 09/951,625 recites a "thermal mass flow rate sensor" in "a by-pass passage" which is conventionally mounted in a passage parallel to the main conduit (c) Claim 14 of the instant application recites "so as to obtain mass flow rate" in lines 14 and 15 whereas claim 11 of the co-pending application of 09/951,625 recites in lines 14 and 15 "so as to obtain a pre-determined mass flow rate". These limitations are not patentably distinct since in each case the mass flow rate is "in accordance with a mass flow rate detected by said flow rate sensor" and thus claim 11 (number as filed) of co-pending application of 09/951,625 anticipates claim 14 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

6. Claims 8 and 10 – 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record (with the exception of the co-pending application 09/951625) neither shows nor teaches a combination for the claimed mass flow controller that comprises in combination with other recited elements a control valve having a solenoid operated plunger that is disposed within a cylindrical conduit so that one-way flow of fluid is effected in a space between an outer circumferential surface of the plunger and an inner circumferential surface of the conduit in a direction of the axis of the cylindrical conduit. Additionally, the limitations recited in claim 8 and 10 – 13 are not recited in the claims of the co-pending application 09/951625.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sangl, Kervagoret, Brundage, Athanassiu and Shimizu et al. disclose various arrangements of flow-thru type solenoid-operated control valves. Bendeict, Benedict et al., Hall et al. and Corser et al. disclose various arrangements for a nozzle type of flow rate sensor using pressure measurements. Ono et al. discloses a mass flow controller having a biased open solenoid valve. Suzuki discloses a thermal mass flow sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (703) 305 - 5295. The examiner can normally be reached on Monday - Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mikado P. Buiz, can be reached on (703) 308 - 0871. The fax phone

Art Unit: 3753

number for the organization where this application or proceeding is assigned is (703) 872 - 9302 and for after-final communications, the fax phone number is (703) 872 9303.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0861.

Ramesh Krishnamurthy
Examiner
Art Unit 3753
May 22, 2003



Michael J. Smith-Burg
Supervisory Patent Examiner
US Patent & Trademark Office

5/23/03